

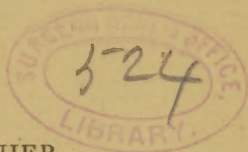
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THE TREATMENT
OF
G O N O R R H Œ A
BY
IRRIGATION OF THE URETHRA.

BY
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The Treatment of Gonorrhœa by Irrigation of the Urethra.

IT is proposed in this article to give the results obtained by the writer in the treatment of gonorrhœa by daily irrigation of the urethra.

A large majority of the cases treated were patients at the Dispensary for Genito-Urinary Diseases, University Hospital; a few are taken from the case-book in private practice.

The remedies used for the purpose of irrigation were bichloride of mercury, nitrate of silver, permanganate of potassium, and trikresol. The irrigator employed was the ordinary glass-jar irrigator used in surgical clinics, and was suspended by a rope, working over a pulley, at a height of six feet above the penis, the patient standing.

The Kiefer nozzle was used in all cases, except in those instances where it was found to be too large to enter the meatus properly; in such cases the soft-rubber catheter was employed. In irrigating the urethra, one quart of the solution—warm, not hot—was used daily for a period of two weeks. In a few cases treatment was continued for three weeks; it was, however, observed that no permanent benefit resulted from this extra week's treat-



ment. In other words, whatever result was obtained from irrigation was always apparent at the end of two weeks, and no distinct advantage was ever gained by prolonging the daily irrigation beyond that point.

Treatment was begun in all the cases in the first week of the disease. Purulent discharge from the urethra, ardor urinæ, and chordee were present in all. Microscopical examination of the discharge was made in every case.

It will be understood in the statistics given below that those cases in which gonococci were found are classified as infectious; where, upon repeated examination, no gonococci were found, the case is classified as non-infectious urethritis.

1. *Bichloride of Mercury*.—Strength of solution, 1 to 15,000, increasing the second week to 1 to 8000. Number of cases treated, 20; infectious, 19; non-infectious, 1; improved by treatment,—*i.e.*, discharge becoming less in quantity and thinner,—8; number unimproved, 11; cured, 1; number in which ardor urinæ and chordee were lessened by treatment, 18; number in which ardor urinæ and chordee were not benefited, 2; number of cases in which posterior urethritis developed, 2; number of cases in which epididymitis developed, 0; number of cases in which gonococci were found in discharge at end of fourteen days' treatment, 19.

2. *Nitrate of Silver*.—Strength of solution, 1 to 6000, increasing in second week to 1 to 3000. Cases treated, 20; infectious, 18; non-infectious, 2; improved by treatment, 13; unimproved by treatment, 6;

cured, 1; number in which ardor urinæ, etc., lessened, 20; number in which ardor urinæ, etc., unaffected, 0; number developing posterior urethritis, 2; number developing epididymitis, 0; number in which gonococci were found at end of fourteen days, 16.

3. *Potassium Permanganate of Potassium*.—Strength of solution, 1 to 4000, increasing in second week to 1 to 2000. Cases treated, 20; infectious, 16; non-infectious, 4; improved under treatment, 10; unimproved, 3; cured, 7; number in which ardor urinæ, etc., lessened, 19; number in which ardor urinæ, etc., unaffected, 1; number developing posterior urethritis, 2; number developing epididymitis, 1; number in which gonococci were found at the end of fourteen days, 5.

4. *Trikresol* (Schering).—Strength of solution, one-half of one per cent. Cases treated, 10; infectious, 10; non-infectious, 0; improved, 1; unimproved, 9; cured, 0; number in which ardor urinæ, etc., lessened, 1; number in which ardor urinæ, etc., unaffected, 9; number developing posterior urethritis, 0; number developing epididymitis, 0; number in which gonococci were found at end of fourteen days, 10.

From a glance at these statistics it will be seen that, as regards therapeutic value, these four remedies stand in the following order: first, permanganate of potassium; second, nitrate of silver; third, bichloride of mercury; and, fourth, trikresol. By far the most valuable remedy in urethral irrigation is permanganate of potassium. It is simply using in a new way what has long been known to every man about town to be a most potent drug in

the treatment of gonorrhœa. It will be noted that gonococci were found in the discharge at the end of two weeks' treatment in only five cases.

Irrigation of the deep urethra with a 1 to 4000 permanganate of potassium solution is the very best method of treating acute posterior urethritis, and will result in a cure in most cases in from about three to five days.

Nitrate of silver follows permanganate of potassium very closely, but does not appear to dry up the discharge as quickly or as well.

In regard to bichloride of mercury, it was evident that those solutions which were strong enough to have any positive antiseptic effect irritated the urethra and increased the ardor urinæ. On the other hand, the weaker solutions appeared to act very little better than so much water on the discharge.

Trikresol is a coal-tar product manufactured by Schering, similar in every way to carbolic acid. Solutions of the strength of one-half of one per cent. were found to be very irritating to the urethra, increasing in a marked degree the ardor urinæ. Solutions of a quarter of one per cent. had little or no effect upon the discharge.

Seventy cases in all were treated by irrigation. Of these, seven were cases of simple urethritis. Thirty-two were improved by treatment,—that is to say, the condition at the end of two weeks was simply a thin muco-purulent discharge at meatus in the morning; no ardor urinæ or chordee or frequent and imperative urination; further irrigation did not improve this condition. These cases were all cured in about two weeks more by use of some astringent injection two or three times daily.

In twenty-nine cases the discharge was not

at all affected by irrigation. These patients showed marked improvement in their condition upon beginning the use of a urethral injection containing bismuth and hydrastis, and the use internally of a capsule containing sandal-wood oil and copaiba.

Nine of the cases were cured within the two weeks. Of these, seven were cases of non-specific urethritis. Of the nine cases cured, seven were cured by permanganate of potassium. Gonococci were found in small quantity in the discharge after two weeks' irrigation in fifty cases.

Posterior urethritis only occurred in five, and epididymitis in one instance.

It should be noted that in fifty-eight cases the ardor urinæ and chordee were entirely relieved by irrigation; and of the twelve cases in which these symptoms were not affected, nine were treated by trikresol, a remedy which was shown to be very irritating to the urethra.

The results obtained in the treatment of these cases seem to warrant the following conclusions being drawn:

1. That irrigation is a distinct advance in the treatment of gonorrhœa; in fact, up to a certain point, it must be considered the proper treatment for that disease. It relieves ardor urinæ and chordee more promptly than any other form of treatment. It is attended with a much smaller proportion of complications, such as total urethritis and epididymitis.

2. That permanganate of potassium is the best remedy for the purpose of urethral irrigation.

3. That irrigation of the urethra alone cannot be relied upon to absolutely cure specific urethritis.

For the cure of the thin muco-purulent discharge which appears at the meatus in the morning, some astringent injection used by the patient himself is necessary.

4. That simple non-infectious urethritis can be cured in from ten to twelve days by daily irrigations with permanganate of potassium.

The writer is of the opinion that, where it is possible to carry out the treatment, irrigation of the urethra with solutions of permanganate of potassium *twice* daily would very materially lessen the duration of the disease. This is, of course, impracticable in dispensary practice. I am now employing at the Dispensary of the University Hospital daily irrigation with permanganate solution, combined with the internal use of a capsule containing five minims each of oil of sandal-wood and oil of copaiba. The results obtained in these cases will be published at another time. It might be well to mention here that, for the purpose of irrigating the urethra completely, the Kiefer nozzle is not by any means all that could be desired. The blunt nose of the nozzle will not fit properly every meatus. On the other hand, it is very doubtful whether the urethra is irrigated to any great extent by its use, as it was observed in almost every case that the irrigating fluid would make a short circuit in the urethra from the point of entrance in the nozzle to the point of exit.

The best results were obtained from the use of a soft-rubber catheter several sizes smaller than the calibre of the urethra, allowing the solution to escape easily along the side.

The following table will show at a glance the results obtained by urethral irrigation :

Drug employed.							
		Number of cases.	Infectious.	Non-infectious.	Improved.	Unimproved.	Cured.
1. Permanganate of potassium.....	20	16	4	10	3	7	5
2. Nitrate of silver.....	20	18	2	13	6	1	16
3. Bichloride of mercury.....	20	19	1	8	11	1	19
4. Tiktresol.....	10	10	0	1	9	0	10
		Gonococci found at the end of two weeks' treatment.					

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